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ABSTRACT

This selected, annotated bibliography for the Audio-Visual Media Research Group of the Open University includes sections on (1) general bibliographies and literature reviews, (2) experimental studies, (3) BBC audience research reports, (4) miscellaneous items, (5) radio in less developed countries, and (6) Audio-Visual Media Research Group Reports. The project was begun with a computer search of the ERIC files to provide a source of background information for members of the research group who are involved in a study of the use of radio programming and audio-cassettes in Open University courses. (CHC)

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I.E.T. Papers on Broadcasting:
Number 104

Educational Radio:

a Select Annotated Bibliography

(Interim Report)

by

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Educational Radio:

a Select Annotated Bibliography

(Interim Report)

The following collection of items is the result of a literature search conducted for the Audio-Visual Media Research Group of the Open University. It was intended that the search should provide a source of background information for members of the research group who are involved in a study of the use of radio programming and audio-cassettes in Open University courses. For this reason items were only included if they appeared to have a fairly direct relevance to this study.

Although originally designed for internal use within the group it was felt that several of the items might be of interest to a wider audience. This interim version of the bibliography has therefore been produced. It is expected that additions and revisions will be made and to facilitate this the items have been divided, rather arbitrarily, into the following six sections, each one numbered separately.

Section 1	.....	General Bibliographies and Literature Reviews
Section 2	.....	Experimental Studies
Section 3	.....	BBC Audience Research Reports
Section 4	.....	Miscellaneous Items
Section 5	.....	Radio in Less Developed Countries
Section 6	.....	Audio-Visual Media Research Group Reports

The project was begun with a computer search of the ERIC files: Resources in Education, and Current Index to Journals in Education.

The Audio-Visual Media Research Group would welcome suggestions for additions to the bibliography.

Duncan H. Brown,
Institute of Educational Technology,
The Open University,

November, 1978

Section 1

GENERAL BIBLIOGRAPHIES

AND

LITERATURE REVIEWS

Crisé, Philip J., Jr., Kenneth I. Epstein, and Teri G. Lukin. Educational Radio: A Review of the Literature. Tallahassee, Florida: Center for Educational Technology, Florida State University, 1974. 51 pp.

****

A useful overview of the topic with a good bibliography of reasonably accessible items.

Madden, Richard. "Educational Radio Bibliography, 1945 - 1967," Educational Broadcasting Review (October 1968), 66 - 79.

****

Includes a topical index but the bibliography itself is of limited usefulness. Its length (359 items) is achieved by including a large number of unpublished Master's theses from the U.S. No annotation is provided and it is unclear whether any attempt was made to assess the value of the items before inclusion.

Forsyth, Richard O. "Radio Research", N.A.E.B. Journal (Nov/Dec 1965), 38 - 47.

****

A very lightweight article though it does give a good perspective on the decline of research into radio in education by an analysis of Master's theses and Doctoral dissertations published in the U.S. Otherwise not very helpful.

Campeau, Peggie L. "Selective Review of the Results of Research on the Use of Audiovisual Media to Teach Adults," Audiovisual Communication Review, 22, No. 1 (1974), 5 - 40.

****

Because of the delimitations imposed by the author (e.g. only "'hard' research data provided by experimental studies of media effectiveness", and only material published between 1966 and 1971) the review is of little use. NO experimental studies of the effectiveness of instructional radio were found to meet the criteria for inclusion. However, useful as an overview of the chaotic 'state of the art'.

Forsythe, Richard O. "Radio, Instructional", The Encyclopedia of Education (1971), Vol 7, 353 - 361

* * * * * * * * * * * * * * * * *

A useful overview of the history of the use of radio for instruction. This is followed by an outline of the qualities inherent in the medium which make it of value for education, together with the problems these qualities can also cause.

Of particular interest is the section (pp. 358 - 359) which takes a critical look at the belief that "instructional effectiveness is related to the number of sensory channels employed in learning." Forsythe shows that this position does not receive much support from recent experimental evidence despite earlier work which appeared to support it.

(See Travers (1970), p 4.6 in this report, for a more detailed analysis of the possible advantages/disadvantages of the transmission of information through more than one sensory channel).

Coppen, H. A Survey of British Research in Audio-Visual Aids. 1945-1971, London: National Committee for Audio-Visual Aids in Education, 1972.

Rodwell, S. Supplement 1 (1972-73): Supplement 2 (1974): Supplement 3 (1975).

* * * * * * * * *

There is a very noticeable decline in the amount of radio research included in each supplement. By number three there is no research concerning the use of radio on its own.

European Council for Cultural Co-operation of the Council of Europe, Harrison, J.A., ed, European Research in Audio-Visual Aids. Part 1: Bibliography, Part 2: Abstracts. National Committee for Audio-Visual Aids in Education, on behalf of the Council of Europe, 1966.

* * * * * * * * *

Section 6.A. deals with radio. However, many of the items in the bibliography are not published in English. Part 2, Abstracts has a standard format for all entries with sections on "Purpose", "Procedure" and "Conclusion".

Razik, T.A. and D.M. Ramroth, Bibliography of Research in Instructional Media. Vol 2 of the Educational Technology Bibliography Series, Englewood Cliffs, New Jersey: Educational Technology Publications, 1974.

* * * * * * * * * *

Although the bibliography claims to have conducted a thorough search of many sources it is interesting that none of the work by Trenaman, or Belson has been included.

Two sections are of particular relevance to our study.

Section N - "Radio" (pp 316-322)
Section R - "Utilization of Media for Learning,
1."Auditory" (pp 426-427)

Stagg, Sylvia and Michael Eraut, A Select Bibliography of Educational Technology. London: Council for Educational Technology, 1975.

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The section on radio (p. 61) is very brief containing only eleven items

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Section 2

EXPERIMENTAL STUDIES

Trenaman, J.M. Communication and Comprehension. London: Longmans, 1967

* * * * * * * * *

This book contains material originally presented as a PhD thesis at Oxford in 1961. The work is of major importance and is written in a clear and unpretentious style. The purpose of the study was to identify factors within the recipients and factors within the message which led to effective communication.

The study was divided into two stages.

> "In the first stage, five different types of subject matter, in the form of television programmes, sound broadcast programmes, and printed articles each version matched for parity of content, were presented to matched samples of the general public. Comprehension and other tests produced evidence of the varying capacities of the recipients and of the relation of those capacities to their attitudes, interests, and personal data, within each of the three media. What was now needed was some means of relating these factors to variations within the programmes themselves.
>
> For this purpose, the second stage was designed. This was a complex experiment in which sixty-four programmes, representing each possible combination of seven content factors, were tested for comprehension, so that independent estimates of the seven factors could be obtained. This study was confined to television programmes because earlier work had investigated the qualities making for comprehension within radio programmes and written material, but so far as is known no study had attempted anything of the sort for television material. In any case, a number of investigations have shown that differences of effect between the principal communication media are slight, and that intelligibility prediction formulae obtained from one medium can be applied with fair success to another.
>
> Effective communication was assessed by tests of recognition and recall. Such tests attempt to measure the communication of information, including items of fact, general ideas and processes. They are not necessarily confined to conceptual items. Much else may be communicated - attitudes and aesthetic and moral values, for example. The present study is not immediately concerned with these more tenuous effects though it does include the results of some measures of attitudes to educational material."
>
> (p. 10)

Among the findings were the following.

"In the message five factors achieve significance. Dominant at all levels is the concreteness of the subject matter, or the extent to which the programme is focussed on what can be perceived rather than on general concepts unrelated to objects within the field of observation. At the lower intellectual levels personification in the subject matter and dramatic forms of presentation become increasingly important, until, at the lowest level, they are equal in effect to concreteness. Vocabulary difficulty (excluding sentence length) has some significance and appears (from the partial regression coefficients) to operate with equal force at all population levels. Finally, a larger number of major points improves comprehension to a slight extent more especially in the upper half of the sample population. The two last factors, however, play a subordinate part to the other three. Judging by the proportions of the variance taken up by the several programme factors in the analyses in Chapter Eleven, and leaving interest aside as a subjective factor, one could estimate that up to fifty per cent of the variance derives from content factors and no more than ten per cent from factors of expression, in so far as they have been considered here. This does not exclude the possibility of obtaining indications of content factors like abstractness and personification from verbal clues, nor the possibility of adding to the variance by considering other stylistic factors.

Within the recipient, the principal source of variation is what is here described as occupational level, though it could undoubtedly be traced back to a combination of education and intelligence. This one factor accounted for as much variance in the stage one analysis as all the programme factors put together. In one analysis after another it has emerged as a powerful discriminant. It is likely, too, to be a stable characteristic in any population, changing only very slowly with widespread modifications in the educational system or with the long-term effects of other sources of education, including broadcasting. A second but almost equally important factor is the recipient's interest in what he is going to experience. It is not clear, however, how far this is an active factor, positively controlling the process of communication or merely a predicting factor; it is probably both."

(p. 108)

Nias, A.H.W. and H. Kay, "Immediate Memory of a Broadcast Feature Programme," British Journal of Educational Psychology, 24 (1954), 154 - 160.

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VI - SUMMARY

1."Eighty-one subjects heard a recording of a half-hour B.B.C. programme which aimed to present information about the legal rights and responsibilities of Innkeepers. Individual parts in the script were characterised and the whole sequence of events dramatised.

2. Subjects were asked thirty questions, these being designed to reveal how they had appreciated in the script its legal points, the main items of the story and its trivialities.

3. Answers showed a surprisingly accurate knowledge of the programme. 80 per cent of the answers on the story were accurate, 50 per cent on the legal points and on the trivial details.

4. The scores were compared with positions on an Intelligence Test and with occupational levels. The highest groups scored 70 per cent on the Law and Trivial questions, the lowest 20 per cent. The range was more limited for the story items - from 90 to 70 per cent.

5. There was a similar trend in the scores of different age groups except that the legal points were retained equally well by all age groups up to fifty-five years.

6. There was no difference between the scores of men or women.

7. The value of this method of presenting material and the manner of its assimilation are discussed."

(See also BBC Audience Research Reports LR/50/2328, The Intelligibility of Broadcast Talks and LR/52/1369, An Enquiry into the Comprehensibility of "Topic for Tonight" which deal with similar studies.)

Horowitz, Milton W. "Organizational Processes Underlying Differences Between Listening and Reading as a Function of Complexity of Material," The Journal of Communication, 18 (March 1968), 37-46.

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Abstract

"Listening and reading are the two major modes for the acquisition of knowledge. This study describes differences in selection (filtering), coding, and organizing materials by these two modes as a function of the complexity of the material. Complexity is defined logically, as well as linguistically and cognitively. For the three sets of materials used here, one excerpt was simple lexically, syntactically, and ideologically. The second was complex lexically and syntactically, but was constructed to contain precisely the same ideas and theme as the first. The third excerpt was simple lexically and ideologically, but was complex syntactically."

"The data were analyzed linguistically in traditional ways and cognitively for ideas, signals, total cognitive units, for omissions, distortions, and for additions of units. In general, listening, like speaking, seems to be freer from the stimulus and more prone to distort the material it conveys. Like speaking, listening seems to be a looser and less inhibited modality. It seems to be a more direct and less complicated process and a modality that is "more in tune" with thought processes as they occur naturally, than does reading."

Horowitz, Milton W. and Alan Berkowitz. "Listening and Reading, Speaking and Writing: An Experimental Investigation of Differential Acquisition and Reproduction of Memory," Perceptual and Motor Skills, 24 (1967), 207 - 215.

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Summary. "Under controlled conditions, subjects (55 students in elementary psychology) differed significantly in their reproductions of The War of the Ghosts, depending upon their mode of acquisition (listening and reading) and their mode of reproduction (speaking or writing). Listeners produced a larger corpus, more ideas, fewer omissions of important units, more distortions, and a stylistically superior reproduction that readers. Reproduction by speaking produced a larger corpus, less diversity of expression, more additions, more subordinate ideas, and more signals than did reproduction by writing. Listening seems (logically and expirically) more closely allied to speaking and reading seems more closely allied to writing."

Theroux, James M. "The Quiz Show: A New Tool for Education," Educational Technology (January, 1975), 43 - 45.

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Using 120 students the author compared the scores on a test about child health and nutrition between a group who had listened to a lecture, a group who had listened to a quiz show covering similar material, and a control group who had listened to neither. Significantly higher scores were achieved by those who listened to the quiz show when compared with the control groups or those who heard the lecture.

Cantril, Hadley and Gordon W. Allport. The Psychology of Radio, New York: Arno, 1971 reprint of 1935 ed.

* * * * * * * *

An extremely interesting book though it should be noted that it is often unclear whether the research reported employed tests of statistical significance.

Two sections of the book seem particularly relevant to our study:

Part 1, "The Mental Setting of Radio," discusses the social context of radio in the mid 1930's. The contrasts and similarities with the situation today are very thought provoking.

Part 2, "Experiment," reports on a number of experiments into various aspects of radio collected under five main topic headings:

1). "Voice and Personality".
2). "Sex Differences in Radio Voices".
3). "Speaker Versus Loud-Speaker".
4). "Listening Versus Reading".
5). "Effective Conditions for Broadcasting".

Trenaman, Joseph. "Understanding Radio Talks", The Quarterly Journal of Speech, 37 (April 1951), pp 173-178

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Although this paper is clearly an early stage in the work which was later published as, Communication and Comprehension (1967), it does contain a number of thought-provoking conclusions.

The experiment tested the immediate recall of a 15 minute informative talk on the electron microscope. This talk was said to be directed at the general listener. However, from the extract reproduced in the paper, I think it would be extremely difficult for anyone without considerable previous knowledge of the topic.

> "A very simple method invented recently is just to let these particles hit and penetrate a photographic plate when they do a bit of atom smashing inside it. If they come from a big machine, such as a cyclotron, you put the plate for a short while at what I may call the spout of the machine ... the place where the particles come out. Or sometimes you can make use of the cosmic ray particles. In either case when the particles go into the plate they leave little dark tracks across it. You have to develop the plate, of course, just as you do after taking an ordinary photograph. But when you do this, you can see these little dark tracks under a microscope ... you see long, straight tracks looking like Roman roads made by the heavy atoms and broken up bits of atoms as they plough through the plate, and curly tracks (like English lanes) made by the lighter electrons and mesons as they zig-zag through it, bumping against atoms as they go. And finally you see the actual point of explosion, looking something like a map of a road junction. This shows up when an atom is hit and knocked into bits".

Six educational groups were selected ranging from graduates to workmen with only elementary education.

It is not surprising that the educational level of the individual was found to be a good predictor of their level of understanding of the talk.

Another finding was that sometimes a particularly vivid image in the script (e.g. a reference to the 'spout' of the cyclotron, or the likening of particle tracks to Roman roads) was recalled when the principle it was intended to illustrate had been misunderstood. Trenaman concludes that:

> "There is clearly some danger of a talk being broken-up by vivid illustrations or, as has been noticed in other experiments, by dramatic insets that do not merge easily into their context."

Because many of the listeners with less formal education could recall words from the specialist scientific vocabulary used in the programme (e.g. cyclotron, electrons, magnification) Trenaman felt that factors other than vocabulary difficulty were influencing intelligibility.

> "It seemed to be the listeners' unfamiliarity with the whole background of physics and with the concepts which the speaker was trying to convey that prevented fuller understanding. Another radio program, about childrens' schooling succeeded in getting over at least some of its important teaching points to about 70% of the sample population."

Section 3

BBC AUDIENCE RESEARCH

REPORTS

Please note that the second part of the code refers to the year of publication, e.g. LR/77/430 was published in 1977.

LR/77/430. The Activities Concurrent with Listening and Viewing. A very short report (five pages plus two tables) but it does show that at any time during the broadcasting day the maximum percentage of listeners who recorded listening as their main activity was 7 percent.

LR/72/423. Radio Programmes about the Visual Arts. An interesting report which makes more use of open-response material than many of the others I have read. It posed the question "Is radio suitable for visual arts programmes?" and found that only 10 percent of respondents felt such programmes should be restricted to television. It interpreted the exceptionally heavy response as indicating that this is a topic which a large segment of the listening public see as important. However, there were a number of criticisms of current visual arts programmes and respondents did admit that television had obvious advantages.

LR/73/427. The Public's Use of Broadcasting in 1971. A national study of the use made by people of the different kinds of radio and television services available to them. Mainly valuable as background statistics on viewing and listening patterns.

LR/72/65. Survey of Attitudes to Radio Drama. The summary of the report states:

"The existence of a trend away from Radio Drama has been demonstrated in two ways. First, it has been shown that of those respondents who listen to radio plays at all, half said they listen less frequently than they used to, and second, that of those respondents who never listen to radio plays now, 60% said they used to listen. However, this trend does not appear to have

been caused by a rejection of Radio Drama per se, but more as a result of other activities, especially watching television, occupying a greater part of people's time. The opinions expressed in open-ended questions indicate that people are well satistied with the standard of Radio Drama."

LR/69/537. The Variability in the Amount of Radio Listening.
Listeners were classified as light, moderate, or heavy listeners. This was then compared with the radio service which they used most; age; sex; social class; age to which full-time education continued; occupational level; selectivity of listening; degree to which they felt they would miss their radio.

The paper concludes:

"If there is one conclusion to which this paper leads it is that though the extent to which an individual uses radio is influenced by the characteristics discussed above, they are inadequate as a complete explanation. Too many people don't conform to expectation. The truth almost certainly is that the amount of time spent in listening to radio is the product of the interaction of circumstances and influences many of which have yet to be identified."

LR/66/1956. The Consumption of BBC Broadcasts.
A typical week (Saturday 5th - Friday 11th November 1966) showing the public's 'consumption' of 'educative' and educational broadcasts in relation to other types of BBC radio and television output.

LR/52/1369. An Enquiry into the Comprehensibility of "Topic for Tonight".
"Topic for Tonight" was a five minute talk following the 10 o'clock light programme news bulletin. Its intention was to "... illuminate some item of news for a broad target population." "The enquiry set out to...establish the extent to which 'Topic for Tonight' could convey information or ideas, given willing and attentive listening, and to identify the factors which made for, or tended to impede, comprehensibility for listeners of different educational, intelligence and other levels. But people are at liberty to listen or not to listen, and those who listen may pay as much or as little attention as they please to what is broadcast. The second object of the enquiry was, therefore,to discover the extent and nature of the 'Topic for Tonight' audience, and the degree to which this audience does in practice 'take in' what it hears."

LR/50/2328 The Intelligibility of Broadcast Talks

A very detailed study by Professor P. E. Vernon of London University.

> "The report is a summary of the results of an enquiry which had a double object: (1) to measure the extent to which broadcasts primarily intended to convey information are understood by their listeners, and (2) to try to identify, and assess the importance of, the qualities in a talk which make for intelligibility."
>
> "Forces educational broadcasts were chosen as a good example of simple informational broadcasts. The enquiry was soley concerned with immediate intelligibility; however, it did manage to identify a number of qualities which help intelligibility and some which hinder it."

Although the listener's interest in the content of a broadcast was found to be the most important indicator of the talk's intelligibility for that listener a number of other factors were identified which increased the likelihood that a broadcast would be understood.

(a) A limited number of main teaching points.
(b) Clear summaries.
(c) Lucidity and liveliness of style.
(d) Concreteness of both subject matter and treatment.
(e) The illustration of any principle or abstract point.

In addition to the converse of the points above other factors were identified which could hinder intelligibility.

(a) Too speedy delivery.
(b) Flowery or literary metaphors.
(c) Overlong sentences.
(d) Difficult vocabulary.
(e) Complex sentence construction.

A useful summary of the report can be found in:

Silvey, Robert. "The Intelligibility of Broadcast Talks," Public Opinion Quarterly (Summer 1951), pp. 299-304

Section 4

MISCELLANEOUS ITEMS

Jorg, Sabine, "Aspects of Attention" preprint of an article published in German in Fernsehen und Bildung, No 1/2 (1977), pp. 3-20 on preprint

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Conclusion. "If anything has been emphasized in these pages it is the realization that there is no single unitary concept of attention. For any specific purposes the variables which are to be affected (dependent variables) and the variables which are to bring about the desired effect (independent variables) have to be carefully defined. It is only in this way that the concept 'attention' can have any practical significance for media practice. And it is only in this way that these viewpoints and opinions can be stated and evaluated in order to reach fruitful conclusions. Whether or not media practitioners feel that they can apply this expanded use of the term 'attention' or whether they feel that the term is satisfactorily used if it describes the staring of a viewer at a screen is their decision.

Another point which has been emphasized is that formal characteristics, such as complexity and sequencing of events, have a systematic and strong influence on perceiving behaviour and perceptual experience of viewers. Even though the studies reviewed do not originate directly from the media domain, they can be seen as basis for further, more closely media-related work. The realization that attentive behaviour - where and whenever it occurs - can be described within the framework of orderly and lawful relations, can lead to an increased use of scientific research results as basis for media presentations."

Summary. "This review of the various aspects of attention is intended as a stimulus for the media practitioners. (Incidentally, there is no such thing as the attention). The description of different approaches for researching attention processes is followed by the presentation of some selected methods for registering attention, such as behaviour observations, physiological measures, memory measures and verbal responses.

The author deals with the effects of expectation, of novelty, and of boredom on the processing of perceptual events; the influence of semantic information on the processing of perceptual contents; the significance of the complexity of a visual happening for its attraction; and finally, of how attention is linked up with processes of familiarity and habit. The review of such relationships shows that there are different ways of 'paying attention' which need to be recognized and considered if a discussion of the problems of attention is to be profitable."

Theroux, James M. Effective Educational Radio: An Approach to Analyzing Programs. Amherst, Mass.: Center for International Education, University of Massachusetts, 1978.

* * * * * * * * *

A very brief (35 page) overview of the "... program characteristics which the producer can manipulate to achieve a desired effect." (p.31).

It is aimed at a very wide audience and the author admits that some of the diagnostic questions he poses at the end of each section may not be relevant for all types of programme or all cultures.

In the context of our study it will probably be most useful as a starting point for discussion.

Ollry, Francis and Elias Smith, "An Index of 'Radio-Mindedness' and Some Applications." Journal of Applied Psychology 23(1939), 8-18.

****

Because of the problems of designing and administering an attitude test to judge what radio meant to different groups of people the authors constructed an index based on a combination of the answers to two questions

1. If you had to give up radio, would you miss it: A good deal...., Somewhat...., Not at all....?
2. To what programmes do you normally listen in the course of the week?

Supplementary questions were also asked,

3. When you are tired do you like best to read...., to listen to the radio...., other.....?
4. In general, do you prefer to learn about news through reading...., Through listening to the radio...., other.....?
5. Has anything you've heard on the radio - previews, dramatizations, or talks - ever prompted you to read about a subject mentioned?

Although the paper is at times unclear about the ways in which the data were analyzed it does seem to suggest a possible methodology for our studies of student and tutor attitudes to radio.

MacKenzie, Norman. Richmond Postgate and John Scupham. Open Learning: Systems and Problems in Post-Secondary Education. Paris: UNESCO Press, 1975

* * * * * * * * *

The third section of this book contains a series of case studies of open learning systems in various countries. Included in these (pp 163 - 181) is a study of "Part-time higher education using radio - an example from the Federal Republic of German" contributed by Stephen Kanocz.

The Radio College (Funkkolleg) has no premises nor does it have full-time staff of its own. It was established in 1966 and among its aims were the opening of the universities to all capable of study; to provide means for professionals to update their qualifications; to encourage new teaching methods, especially through the use of telecommunications.

Radio is used as a teaching medium together with printed booklets. However, a number of factors make this use of radio less interesting than might have been hoped. During each one year course about 30, one hour radio programmes are broadcast but Kanocz reports that radio has been used in a limited way. Referring to the period 1966-69 Kanocz says:

> "Results were rather disappointing with regard to pioneering new teaching methods for universities, as the series failed to make use of the full potentialities of radio and consisted mainly of traditional lectures rather than of documentary recordings and/or dramatizations."
>
> (p. 168)

About the use of radio in the later period (1970 onwards):

> Development of team and radio co-operation
>
> "It was not until the linguistics course began in 1971 that a first attempt was made to exploit the full potentialities of radio by presenting the 'living language' in scenes, dialogues etc. This new departure was abandoned, however, during the course. Another and more vigorous attempt to establish radio expertise inside the

Funkkolleg team was made by Saarländischer Rundfunk (SR), when, in 1973, a scientist was appointed as radio editor of the biology course and given two assistants qualified to speak on the subject. The academic nucleus of the team at this time happened to be particularly responsive to suggestions by DIFF educationists and the SR broadcasting experts."

(p. 171)

Unfortunately this hint at the possible development of new techniques in radio programming is not developed further. It is interesting, however, that an 'institution' which uses radio but not television has still found it difficult to employ radio in imaginative ways.

Foxall, Anna. "Radiovision - a Survey and Discussion," Programmed Learning and Educational Technology, 9 No. 6 (1972), pp. 300-312.

* * * * * * * * * *

A very comprehensive paper which considers the history of radiovision; how it is currently being used; the advantages and disadvantages; and research into radiovision's effectiveness.

The author extends the topic to include a brief look at audiovision materials and concludes that both radiovision and audiovision could do many of the things television has been doing.

Travers, Robert M.W. Man's Information System, Scranton, Pennsylvania: Chandler, 1970

* * * * * * * * * * * * * * * *

This book is based on two reports by Travers and others (1964, rev. ed 1967). Several additions have been made and the original reports, which were highly technical, have been reworked to form a supplementary textbook for students "specializing in media and educational technology." As such the book is an excellent overview of the growing body of research into information processing which has implications for the design of audio-visual materials.

Of particular interest to our study of radio are Chapter 4 (pp. 68 - 98), "The Capacity of the Human Information System," and Chapter 5 (pp. 99 - 114), "The Human Information System as a Single-Channel System." Using the Broadbent model as a simplified representation of information processing at the higher levels of the perceptual systems Travers shows that where non-redundant information is transmitted through two different perceptual systems:

> "The findings are clear. The two channels do not result in the retention of greater quantities of information than when one channel is used alone. Block one channel and more is learned through the remaining channel, but the gain and the loss are about equal. The data generally suggest that the main factor limiting the rate at which information is received and at least temporarily stored depends on events at the highest levels of the nervous system and not on the number of perceptual systems through which information is transmitted. In the bisensory condition (Travers, Chan & Van Mondfrans, 1965), it has been found that adding colour and embellishment to the visual channel increased information acquisition through that channel, but the gain is accompanied by a corresponding loss of information acquired through the auditory channel. The data are always as though the senses were pumping information into a single narrow and limited-capacity system that could handle only so much information and no more."

Section 5

RADIO IN

LESS DEVELOPED COUNTRIES

A great deal of material is now available on this topic mainly in the form of case studies. The following are a small sample which show the variety of ways in which radio is being used.

Spain, Peter L., Dean T. Jamison and Emile G. McAnany. Radio for Education and Development: Case Studies. 2 vols. Washington: World Bank; Staff Working Paper Number 266, 1977.

Theroux, James M. Instructional Radio Reconsidered: An International Perspective. U.S. Educational Resources Information Center, ERIC Document ED 119 722, November, 1975, 17p.

Jamison, Dean T. and Emile McAnany, Radio for Education and Development Beverly Hills, California: Sage Publications, 1978, 221p.

Section 6

AUDIO-VISUAL MEDIA RESEARCH GROUP REPORTS

IET PAPERS ON BROADCASTING

Paper 54. Meed, John. The Use of Radio at the Open University, 1971-1974. Milton Keynes: Open University, 1975 (unpublished paper).

Paper 82. Berrigan, Frances, and Anne Gibson. Radio and Audio-Vision at the Open University, Milton Keynes: Open University, 1977. (unpublished paper)

Paper 85. Berrigan, Frances, and Anne Gibson. Radio and Audio-Vision at the British Open University: Towards individualization. Milton Keynes: Open University (n.d.),(unpublished paper).

BROADCAST EVALUATION REPORTS

Report
Number 8

Author: Gallagher, Margaret
Date: 1975
Course: E221 Decision Making in British Educational Systems
Broadcast: Radio Programme 15
Title: "Caught in the Net"
Focus of Evaluation: Radio Drama

Report
Number 19

Author: Koumi, Jack
Date: 1975
Course: A302 The Nineteenth Century Novel
Broadcast: Radio Programme 6
Title: "Studying the Novel: A Discussion."
Focus of Evaluation: Students taking part in programmes.

Report
Number 25

Author: Berrigan, Frances
Date: 1977
Course: S333 Earth Science Topics and Methods
Broadcast: Radio Programme 4
Title: "Canadian Shield and Skye."
Focus of Evaluation: Use of radio-vision.

MISCELLANEOUS ITEMS

Berrigan, Frances and Anne Gibson. Open University Radio and Audio-Vision: Self Instructional Package, Milton Keynes Open University, 1977.